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|--|--------------|----------------------|---------------------|------------------|
| APPLICATION NO.  | FILING DATE  | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/673,140   | 09/30/2003   | Christopher Evans    | 19111.0126          | 3825             |
| 68009  | 7590         | 04/24/2009           | EXAMINER            |                  |
| Hanify & King, P.C.<br>1055 Thomas Jefferson Street, NW<br>Suite 400<br>WASHINGTON, DC 20007 |              |                      | MAHMOOD, REZWANUL   |                  |
| ART UNIT   | PAPER NUMBER |                      |                     |                  |
| 2164   |              |                      |                     |                  |
| MAIL DATE  |              | DELIVERY MODE        |                     |                  |
| 04/24/2009   |              | PAPER                |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |
|------------------------------|--------------------------------------|-------------------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/673,140 | <b>Applicant(s)</b><br>EVANS ET AL. |
|                              | <b>Examiner</b><br>REZWANUL MAHMOOD  | <b>Art Unit</b><br>2164             |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

#### Status

- 1) Responsive to communication(s) filed on 19 February 2009.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-9 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

### **DETAILED ACTION**

This action is in response to the communication filed on February 19, 2009.

Claims 1-9 are pending in this office action.

#### ***Response to Arguments***

Applicant's arguments filed on February 19, 2009 have been fully considered but they are not persuasive for the following reasons:

Applicant argues that Levine does not teach or even suggest the features "preventing execution of joins involving any of the tables remaining in the list".

Examiner respectfully disagrees all of the allegations as argued. Examiner, in his previous office action, gave detail explanation of claimed limitation and pointed out exact locations in the cited prior art.

Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 2111 [R-1]

#### **Interpretation of Claims-Broadest Reasonable Interpretation**

During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 162 USPQ 541,550-51 (CCPA 1969).

Levine teaches in Column 4 lines 1-27, Column 13 lines 43-67, Column 14 lines 1-9 and Figure 8 preparing a list of tables that are related to returning the set of results

but that are not directly referred to by the SQL statement as claimed. This list is the only such list in Levine. Tables with only join relationships are removed from this list, thus the remainder of the tables are prevented from being involved in execution of join operations. Again, only the related tables to the join relationship are removed, so any tables not related still remain in the list.

Levine also discloses in Column 6, lines 1-33 and Figures 1-2, as cited in the previous office action, a table selection window 20 which lists the tables in a particular database. A user can select tables that must be accessed in order to return a set of result from the list of widow 20 and form a list of tables in sequence display window 42. Only the tables in window 42 are involved in a join. As only a few tables are selected from the list of the table selection window 20, execution of join for the remaining tables in window 20 are prevented.

For the above reasons, Examiner believed that rejection of the last Office action was proper.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 is rejected under 35 U.S.C. §101 because the claimed method is not tied to a particular machine.

The claim preamble includes only a nominal recitation of "a computer

implemented method", however, just citing computer implemented method does not tie the method to a particular machine.

Nominal recitations of structure in an otherwise ineligible method fail to make the method a statutory process. See Benson, 409 U.S. at 71-72.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Levine (US Patent 6,640,221).

With respect to claim 1, Levine discloses a computer-implemented method of preventing execution of unnecessary joins between tables in a database, the method comprising the steps of:

- a. presenting a Structured Query Language (SQL) statement to the database, the SQL statement referring directly to a set of tables in the database (Levine: Abstract, lines 1-14; Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Figures 1, 2, 6; Here a Structured

- Query Language statement is presented to the database using a query tool, which has the scope that extends to a set of tables in the database and returns a result);
- b. preparing a list of tables that have a potential to be used to return the set of results but that are not directly referred to by the SQL statement, wherein the list of tables is the only list prepared (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the query tool prepares a list of tables that are related to returning the set of results but that are not directly referred to by the SQL statement, the user selects the tables from the list which will be referred directly by the SQL statement);
  - c. removing tables that must be accessed in order to return the set of results from the list in accordance with a predetermined set of rules (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2, and 8; Here the tables that will be used by the SQL statement are selected from the list);
  - d. preventing execution of joins involving any of the tables remaining in the list, wherein there is at least one table remaining in the list (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2, and 8; Since the tables required by the SQL statement are selected from the original

- list, the rest of the tables in the list do not participate in the SQL statement and are prevented from participating in execution of joins); and
- e. returning a set of results from the database based on the SQL statement (Levine: Abstract, lines 1-14; Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Figures 1, 2, 6).

With respect to claim 2, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes allowing removal of a table from the list if the table is part of a join chain (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 3, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes a rule allowing removal of a table from the list if the table forms the detail table in a join between a master table and a detail table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 4, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes a rule allowing

removal of a table from the list if detail item values might not exist in a master table joined to a detail table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 5, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes a rule allowing removal of a table from the list if the table has a mandatory filter (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 6, Levine discloses a computer-implemented method according to claim 4, wherein the predetermined set of rules further includes a rule preventing removal of a table from the list that would otherwise be allowed, if the join is an outer join on a master table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 7, Levine discloses a computer-implemented method according to claim 5, wherein the predetermined set of rules further includes a rule preventing removal of a table from the list that would otherwise be allowed, if the join is

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an outer join on a master table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 8, Levine discloses a computer program comprising computer program code means adapted to perform the steps of claim 1 when said program is run on a computer (Levine: Column 5, lines 25-30).

With respect to claim 9, Levine discloses a computer program product comprising program code means stored on a computer readable medium for performing the method of claim 1 when said program product is run on a computer (Levine: Column 5, lines 25-36).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Gutierrez-Rivas reference (US Patent 6,553,371) teaches about selecting table joins. The Kumar reference (US Publication 2003/0088548) teaches about extracting data from a database using a reduced query.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REZWANUL MAHMOOD whose telephone number is (571)272-5625. The examiner can normally be reached on M - F 10 A.M. - 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571)272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. M./  
Examiner, Art Unit 2164

April 8, 2009

/Charles Rones/  
Supervisory Patent Examiner, Art Unit 2164